

Title (en)

Waveguide compositions and waveguides formed therefrom

Title (de)

Zusammensetzungen für Wellenleiter und daraus hergestellte Wellenleiter

Title (fr)

Compositions pour dispositifs de guide d'ondes et dispositifs de guide d'ondes formés à partir de celles-ci.

Publication

EP 1586603 A1 20051019 (EN)

Application

EP 05252238 A 20050409

Priority

US 56205904 P 20040414

Abstract (en)

Provided are compositions which include a polymer, having units of the formula (RSiO_{1.5}), wherein R is a substituted or unsubstituted organic group, and a plurality of functional end groups. A first component is provided for altering the solubility of the composition in a dried state upon activation. A second component contains a plurality of functional groups chosen from epoxides, oxetanes, vinyl ethers and combinations thereof. The second component is present in an effective amount to improve flexibility of the composition in a dried state before and after activation. Also provided are flexible optical waveguides, methods of forming flexible optical waveguides and electronic devices that include a flexible optical waveguide.

IPC 1-7

C08K 5/00; **G03F 7/075**; **C09D 183/04**; **G02B 1/04**; **G02B 6/12**

IPC 8 full level

C08K 5/00 (2006.01); **C08L 83/04** (2006.01); **C08L 101/02** (2006.01); **C09D 183/04** (2006.01); **G02B 1/04** (2006.01); **G02B 6/10** (2006.01); **G02B 6/12** (2006.01); **G02B 6/138** (2006.01); **G03F 7/075** (2006.01)

CPC (source: EP KR US)

C08L 83/06 (2013.01 - KR); **C09D 183/04** (2013.01 - EP US); **G02B 1/045** (2013.01 - EP US); **G02B 6/138** (2013.01 - EP US); **B82Y 30/00** (2013.01 - KR); **G02B 2006/1215** (2013.01 - EP US)

Citation (search report)

- [E] EP 1535977 A1 20050601 - ROHM & HAAS ELECT MAT [US]
- [X] US 6537723 B1 20030325 - TOYODA SEIJI [JP], et al
- [X] EP 1251155 A1 20021023 - SHIPLEY CO LLC [US]
- [PX] EP 1426793 A1 20040609 - SHIPLEY CO LLC [US]
- [PX] EP 1434068 A2 20040630 - SHIPLEY CO LLC [US]
- [X] US 5366846 A 19941122 - KNUDSEN PHILIP D [US], et al
- [A] US 2003099899 A1 20030529 - GRONBECK DANA A [US], et al

Cited by

US8507179B2; US8809482B2; WO2010068338A1; WO2010068337A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1586603 A1 20051019; **EP 1586603 B1 20070613**; CN 100378468 C 20080402; CN 1690125 A 20051102; DE 602005001341 D1 20070726; DE 602005001341 T2 20080221; DE 602005014984 D1 20090730; JP 2005325344 A 20051124; KR 101183269 B1 20120914; KR 20060045601 A 20060517; TW 200606590 A 20060216; TW I398732 B 20130611; US 2005244124 A1 20051103; US 7072565 B2 20060704

DOCDB simple family (application)

EP 05252238 A 20050409; CN 200510066615 A 20050414; DE 602005001341 T 20050409; DE 602005014984 T 20050409; JP 2005115424 A 20050413; KR 20050030192 A 20050412; TW 94111450 A 20050412; US 10597905 A 20050414